Greater Sage-Grouse: A New Direct

by Scott Gardner

While the U.S. Fish and Wildlife Service (USFWS) considers whether to list sage grouse as threatened or endangered under the Endangered Species Act (ESA), it is giving states the opportunity to develop their own conservation plans that would make listing of some populations unnecessary. California is taking that opportunity, working with local, state and federal agencies as well as private stakeholders.

In recent years, biologists have come to recognize two species of sage grouse. The Gunnison sage-grouse (*Centrocercus minimus*), which occupies the Gunnison Basin in southwestern Colorado and southeastern Utah, is considered a different species because of its distinct genetics, size, appearance, behavior, and geographic distribution. The USFWS has already determined that the Gunnison sage-grouse is a candidate for listing under the ESA. The greater sage-grouse (*Centrocercus urophasianus*) is a larger bird that occupies sagebrush habitats in 11 western states, including eastern California, and two Canadian provinces.

Competing environmental and land use interests have many referring to sage grouse as the next spotted owl. As with the spotted owl, interests in listing the sage grouse focus on land use activities in sagebrush habitat throughout the west. Sage grouse have become symbolic of efforts to protect their namesake, sagebrush, which is the critical habitat component for the survival of sage grouse.

Sage grouse evolved in habitats dominated by sagebrush and native perennial grasses—habitats that were historically shaped by wildfires that would burn small portions of habitat at a time. The result was a mosaic of young and old patches.

Sage grouse need varied sagebrush conditions for their life stages, ranging from young stands, rich in grasses and forbs for nesting and brood rearing, to old stands that provide cover and food for the birds in severe winters. These habitat conditions were achieved by fire over a period of decades.

Ironically, wildfire is now an enemy of sage grouse in many areas, threatening the continued existence of remaining populations.

On the other hand, wildfire suppression and other factors have also resulted in the invasion of juniper and pinion trees in areas of historic sagebrush habitats. Conversions like these have resulted in the loss of sage grouse habitat that will be permanent without major efforts to turn them around.

The effects of livestock grazing on public and private lands throughout the west have long been considered one of the largest impacts to the birds. For several decades, public and private land managers eradicated sagebrush, often replacing it with non-native wheat grasses to create forage for livestock.

Exotic plant invasions have degraded sage grouse habitats and complicated the wildfire story even more. Cheatgrass is a rapidly expanding exotic annual grass that is becoming the dominant understory plant in many sagebrush habitats. Cheatgrass burns easily and it out-competes native perennial grasses after a fire. This change in the plant community has changed fire frequency from decades to mere years.

Current threats to sage grouse and their habitats go far beyond livestock grazing and fire issues. In some parts of the country, energy development could have a detrimental impact on sage grouse. With rising energy prices, natural gas and petroleum deposits in areas of Wyoming and Montana are very attractive today, and many of these potential drilling sites are on public lands. Developing energy resources requires roads, power lines, and other structures, which remove habitat and increase disturbance, exotic plant invasions, and predators. Wyoming Governor Dave Freudenthal has called for a halt in new leases of public land for natural gas exploration until the potential impacts on wildlife, including grouse, are fully explored.

The effects of man-made structures are not new to sage grouse; for years they have been dying on fences that crisscross their landscape. First, the ranchers were told to fence out the cattle to improve habitat conditions; now they are being told that fences kill the birds. First, the power industry was told to build power lines that are friendly to raptors (eagles and hawks); now they are told that the perches are increasing predation on sage grouse. The bottom line is that everything we do to change the landscape changes the conditions that these birds and other wildlife evolved under, and the effects often don't become apparent immediately.

Hunting is a concern with sage grouse, which are not as productive as other game birds. Recent information demonstrates that sage grouse are indeed vulnerable to overhunting. Fortunately, we have a very conservative permit system in California that protects sage grouse populations from overharvest, and that hunters have overwhelmingly supported.

On top of all of these impacts that have built up cumulatively over time, a recent and very scary

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risk to sage grouse is West Nile Virus, which is particularly deadly to birds. Several sage grouse have died from the disease in parts of Wyoming where it is known to occur. Recent laboratory tests demonstrate that West Nile Virus is particularly virulent and deadly in sage grouse, perhaps more so than crows, which are thought to be among the birds most affected by the disease. The disease is spreading rapidly in California, but apparently has not killed any sage grouse yet.

Since 1999, the USFWS has received 8 petitions to list sage grouse under the Endangered Species Act in all or portions of their range, including one for the population of grouse in Mono County. Recent genetic work indicates that sage grouse in Mono County and across the border in Lyon County, Nevada, have been separated from other sage grouse populations for thousands of years. Therefore, they have taken a genetic trajectory of their own, a phenomenon called genetic drift, very similar to the Gunnison sage-grouse, which eventually mutated into their own species. However, greater sage-grouse in Mono County do not appear to have different appearance or behaviors from the rest of their range. The petition to list those birds was based on this genetic uniqueness, but it was rejected by the USFWS because the information to support it is not complete and the threats to the bird are not evident.

In 2000, the Western Association of Fish and Wildlife Agencies (WAFWA), including all states and provinces in the species range, signed an agreement to develop local, state, and national conservation strategies for sage grouse. This approach was encouraged by the

Sage grouse.

USFWS under their new PECE (Policy for Evaluating Conservation Efforts when making listing decision), adopted in 2003. The policy encourages the development of conservation strategies to preclude the need for listing a species under ESA and it has stringent requirements to ensure that plans will be implemented and are effective.

As part of the development of a range-wide conservation strategy, WAFWA recently produced the Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats. The report is about 700 pages long, analyzing population and habitat trends for the past 40 years and identifying risks to the continued persistence of the species range-wide. California, which contains two populations of sage grouse (Lassen and Mono counties), is identified as the only state with a stable trend in populations since 1965. However, significant losses of sage grouse range on the periphery of current populations had already occurred by that time. Fortunately, responsible management and fewer threats have helped reduce the risk of extinction of populations in California, but their populations remain small and potentially unique, which is a risk in and of itself.

The DFG is leading the development of conservation plans in California with local working groups, involving key agency and private stakeholders to come together and develop plans to conserve local populations. Because most of our populations are essentially shared with Nevada, we have developed a bi-state plan, the first version of which was released this summer. Development of local plans by local people, who in turn implement conservation actions and monitor their populations, may be one of the most effective means of conserving our resources and a new direction for the Endangered Species Act.

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